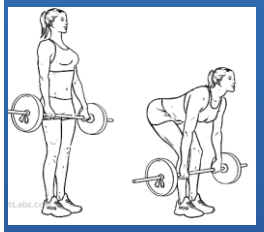
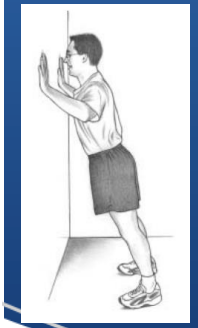
Resistance Exercises and their Benefits[2,3]

Squats: strengthen hips, thighs, and buttocks, help rise from chair



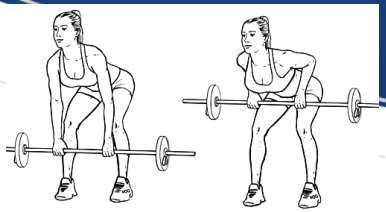
Deadlifts: decrease lower back pain, help with daily tasks such as picking things up

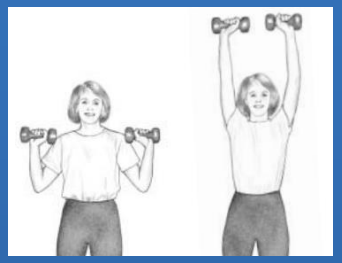
Toe Stands: strengthen calves, increase balance and stability



Wall Push-Ups: strengthen arms, shoulders, and chest

Rows: strengthens arms and back, increases ability to lift and pull

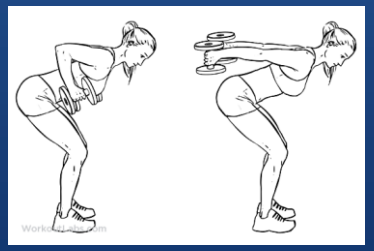




Overhead Press: strengthens arms, upper back, shoulders, helps with daily tasks like reaching for objects on high shelves

Bicep Curls: help with daily tasks like carrying groceries

Tricep Kickbacks: increase arm strength, help rise from chair and reach for things on shelves



ELDERLY and Resistance Training

Paul H. Broyhill Wellness Center

THRIVE Program

Ella Perrin

Other resources:

https://go4life.nia.nih.gov/exercises/strength
https://www.cdc.gov/physicalactivity/downloads/growing_stronger.pdf
https://fitness.mercola.com/sites/fitness/archive/2015/12/04/limited-mobility-exercises.aspx

Changes with Aging[1]

Aging is accompanied by many physiological changes. One of the most predominant physiological changes is sarcopenia, which is the loss of muscle mass and strength with age. It is estimated that after your fourth decade, you lose about 1% of your muscle mass each year. This depletion of muscle mass contributes to increased disability, frailty, and risk of falls and injuries as you age. Strength training helps combat sarcopenia by increasing muscle mass and strength. Strength training also reduces the risk of falling because it causes improved balance and coordination. Adapting a strength-training program can help elderly people maintain independence in performing tasks of daily life.

Resistance Training and Disease[2]

Resistance Training Definition:[1]
"an activity in which muscles move dynamically against weight (or other resistance) with small but consistent increases in the amount of weight being lifted over time."

Benefits of Resistance Training[1]

- increased muscle mass and strength
- increased bone density
- improved flexibility, balance, and coordination
- increased self-confidence
- increased sleep
- decreased depression

Type II Diabetes- strength training causes decreased hemoglobin A1c (HbA1c), systolic blood pressure, and abdominal fat, and increased glucose metabolism through increased muscle mass, which decreases the risk of diabetic complications.

Cardiovascular Disease- strength training can increase cardiovascular fitness (aerobic endurance) in people with low aerobic capacity.

Obesity- strength training increases metabolism through increased muscle mass, which causes you to burn more calories and helps you control your weight.

Arthritis- strength training increases your strength and flexibility, and can help relieve pain and stiffness associated with arthritis.

Osteoporosis- strength training increases bone density and reduces risk of fractures and risk of falling by strengthening muscles and improving balance and coordination.

Back Pain- strength training can reduce back pain, especially of the lower back, by

1. Segiun RA and Nelson ME. 2003. The benefits of strength training for older adults. *American Journal of Preventative Medicine* 25(3): 141-149. Web 10/10/17.
2. Seguin RA, Epping JN, Buchner DM, Block R and Nelson ME. 2002. Growing stronger. *Centers for Disease Control and Prevention.* Web 10/10/17.
3. Illustrated Exercise Guide. WorkoutLabs. Web 10/18/17. http://workoutlabs.com/exercise-guide/